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REPORT OF THE CIVIL AERONAUTICS BOARD
on the
Investigation of a Propeller Accident

Ralph Stanley MacKenzie, a private pilot with a single-engine land, 0-430 h.p. rating, was struck by an aircraft propeller at Meacham Field, Fort Worth, Texas, about 1 45 p.m. on November 28, 1943, and succumbed to his injuries on December 3, 1943. The aircraft involved, a Stinson SM-7A, NC 980W, owned by the Aeronautical Development Company, Richmond, Virginia, was not damaged. Its pilot, James William Marshall, held a commercial pilot certificate with single and multi-engine land, 0-1025 h.p. ratings.

Pilot Marshall, preparing for a flight to Dallas, Texas, attempted to start the engine but found the battery too weak to turn the starter. MacKenzie volunteered to turn the propeller by hand, assuring Pilot Marshall that he was quite familiar with cranking airplanes. The propeller was pulled through several times with the switch "off", then twice with the switch "on." Following this, MacKenzie called for "switch off" and it was turned to that position by the pilot. When MacKenzie moved the propeller this time the engine backfired and the propeller struck his head and left arm, inflicting serious injuries which proved fatal five days later.

Investigation revealed that the probable cause of this accident was a loose ground wire to one of the magnetos, which rendered the switch inoperative on this magneto and allowed current to reach the spark plugs when the engine was turned over, although the switch was in the "off" position. This apparently resulted in a backfire during MacKenzie's attempt to turn the propeller by hand.

BY THE BOARD

/s/ Fred A. Toombs
Secretary